

REMARKS/ARGUMENTS

Specification

Examiner has objected to the specification under 37 CFR 1.75(d)(1) and MPEP 608.01(o). In response, Applicant has appropriately amended Claims 32 and 38 to render this objection moot.

Claim Rejections – 35 USC 103

Examiner has rejected Claims 26 – 38 under 35 USC 103(a) as being unpatentable over Tompkins in view of Dundas. Specifically, in responding to Applicant's earlier arguments, Examiner states,

Applicant's arguments regarding the Dundas reference have been carefully considered. However, the Dundas reference is not relied on to show a computerized control system. The primary reference to Tompkins et al. discloses the computerized control system in question. The Dundas reference is merely relied on to show an automatic control system (note lines 15-33 in col. 2) which makes use of an ambient air temperature sensor which functions with the tub/pool water temperature sensor in order to heat or cool the tub/pool water using minimal energy. (emphasis added)

In response, Applicant respectfully submits that the reason for Examiner's reliance upon Dundas is not present in any of Applicant's claims. Applicant has amended Claim 1 so that it now contains the limitation,

...wherein said computer is programmed to receive said ambient air temperature signals from said ambient air temperature sensor and to start and run said at least one water pump after receiving said ambient air temperature signals, wherein said at least one water pump pumps water through said spa piping so that the temperature of the water inside said spa piping is maintained above freezing level.

Only Applicant has recognized the utility of using an ambient air temperature sensor to start and run a water pump. In stark contrast, Dundas uses an ambient air temperature sensor to control an air pump. To utilize an ambient air temperature sensor to control an air pump is intuitive and obvious. However, to use an ambient air temperature sensor to start and run a water pump is novel, unique and not obvious.

The benefit of using the ambient air temperature sensor to start and run a water pump is clearly outlined on page 5. Applicant states,

The programming of spa controller 12 has been modified from spa controller 11 (FIG. 1) to include the ability to be able to utilize information reported by sensor 17 to better regulate the water temperature of spa 2 to prevent freezing of its associated piping.

Moreover, the method of using the ambient air temperature sensor to start and run a water pump is described in reference to Table 1 on page 5.

TABLE 1

Ambient Air Temp	Conduct a 1 minute purge every:
40 deg. F.	2 hours
28 deg. F.	1 hour
14 deg. F.	30 minutes
5 deg. F.	15 minutes

In the first preferred embodiment, as the temperature at sensor 17 decreases to 40 deg. F sensor 17 will send an electrical signal to spa controller 12. Spa controller 12 will then start water pumps 13 and 14 and air blower 16. They will each run for 1 minute every two hours. As shown in Table 1, if the temperature drops to 28 deg. F at sensor 17, water pumps 13 and 14 and air blower 16 will conduct a 1-minute purge every hour. Likewise, when sensor 17 reports a temperature of 14 deg. F, the system will purge every 30 minutes and at 5 deg. F. the system will purge every 15 minutes. In the first preferred embodiment, as an extra added measure of protection, after the ambient has risen above 40 deg. F., spa controller 12 will continue to run water pumps 13 and 14 and air blower 16 for one minute every 2 hours for the next 24 hours.

New Claims

Applicant has added new Claims 39 and 40. The limitations of Claims 39 and 40 are not disclosed in the prior art. Therefore, these claims should be allowable.

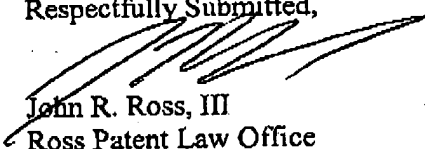
Summary

Therefore, for all the reasons stated above, Claim 26 should now be allowable. Independent Claims 32 and 38 and 40 are similarly limited and should be allowable. All other outstanding claims are dependent upon allowable claims and should likewise be allowable.

CONCLUSION

Thus, for all the reasons given above, this application, as the claims are presently limited, define a novel, patentable, and truly valuable invention. Hence allowance of this application is respectfully submitted to be proper and is respectfully solicited.

Respectfully Submitted,



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